

1. A vascular access device comprising:

a housing having a distal end, a proximal end, and a cavity, said proximal end being adapted to connect to a catheter;

a self-sealing injection port in fluid communication with the cavity;

a subhousing having a pair of ends, said subhousing being movably connected at one end to the housing so that a position of the other end of the subhousing relative to the housing can be selectively adjusted within a range of positions; and

a unidirectional fluid valve permitting solution flow from the subhousing to the housing while substantially preventing solution flow from the housing to the subhousing.

2. The vascular access device of claim 1 wherein the housing is generally linearly aligned so that the self-sealing injection port is opposite the proximal end.

3. The vascular access device of claim 1 wherein the subhousing is connected to the housing via a swivel joint.

4. The vascular access device of claim 3 wherein the swivel joint provides a 360 degree range of motion.

5. The vascular access device of claim 1 further comprising:

a luer-style connector for securing the housing to the catheter.

6. The vascular access device of claim 1 further comprising:

a second self sealing injection port which is connected to the subhousing.

7. The vascular access device of claim 1 wherein the pair of ends of the subhousing are separated by approximately 90 degrees.

8. The vascular access device of claim 1 further comprising:

a cap for sealing one of the pair of ends of the subhousing.

9. The vascular access device of claim 1 wherein the fluid valve is carried within the housing.

10. The vascular access device of claim 1 wherein the fluid valve includes a movable disk-shaped element.

11. An apparatus comprising:

a catheter adapted for entry into a vascular system; and

a vascular access device having a hollow housing having a distal end, a proximal end, and a cavity, said proximal end being adapted to connect to a catheter, a self-sealing injection port in fluid communication with the cavity, a subhousing having a pair of ends, said subhousing being movably connected at one end to the housing so that a position of the other end of the subhousing relative to the housing can be selectively adjusted within a range of positions and a unidirectional fluid valve permitting solution flow from the subhousing to the housing while substantially preventing solution flow from the housing to the subhousing.

12. The apparatus of claim 11 wherein the housing is generally linearly aligned so that the self-sealing injection port is opposite the proximal end.

13. The apparatus of claim 11 wherein the subhousing is connected to the housing via a swivel joint.

14. The apparatus of claim 11 further comprising:

a second self sealing injection port which is connected to the subhousing.

15. The apparatus of claim 11 wherein the pair of ends of the subhousing are separated by approximately 90 degrees.

16. The apparatus of claim 11 wherein the fluid valve is carried within the housing.

17. The apparatus of claim 11 wherein the fluid valve includes a movable disk-shaped element.

18. The apparatus of claim 11 further comprising:

a needle received within the catheter.

19. A method comprising the steps of:

providing a vascular access device having a hollow housing having a distal end, a proximal end, and a cavity, a self-sealing injection port in fluid communication with the cavity, a subhousing having a pair of ends, said subhousing being movably connected at one end to the housing so that a position of the other end of the subhousing relative to the housing can be selectively adjusted within a range of positions and a unidirectional fluid valve;

connecting the vascular access device to a catheter at its proximal end;

connecting the vascular access device to a fluid line at one end of the subhousing;

adjusting the position of the subhousing relative to the housing; and

flowing fluid from the subhousing to the housing and through the fluid valve.

20. The method of claim 19 further comprising the step of:

withdrawing fluid within the housing through the self sealing injection port.

21. The method of claim 19 further comprising the step of:

inserting a wire-based treatment device through the self-sealing injection port and into the vascular system of the patient.

22. The method of claim 21 wherein the wire-based treatment device is selected from the group consisting of: a guide wire, a balloon catheter and a pressure sensor.

23. A vascular access device comprising:

a hollow housing having a distal end, a proximal end, and a cavity, said proximal connected to a catheter having an elongated catheter sheath extending in a predetermined direction;

a self-sealing injection port in fluid communication with the cavity;

a subhousing having a pair of ends including a first end connected to the housing and a second end connected to an IV line which extends generally in the predetermined direction, wherein the housing and subhousing together define a generally U-shaped structure; and

a unidirectional fluid valve permitting solution flow from the subhousing to the housing while substantially preventing solution flow from the housing to the subhousing.

24. A vascular access device of claim 23 wherein the subhousing is movably connected to the housing via a swivel joint.